

**WHAT IS CLAIMED IS:**

1        1. A method of sending an IP-based data packet  
2 across a radio link, said data packet having a packet  
3 header including an IP identification header field,  
4 sequence number header field, and time stamp header  
5 field, said method comprising the steps of:  
6                compressing said packet header;  
7                adjusting an IP identification within said IP  
8 identification header field of said packet header to  
9 conform to a stream-sequential identification format;  
10                synchronizing said data packet to a radio frame  
11 based on a time stamp within said time stamp header field  
12 of said packet header and a timing of said radio frame;  
13 and  
14                transmitting said data packet with said radio  
15 frame over said radio link.

1        2. The method according to claim 1, wherein said  
2 data packet is transmitted without information related to  
3 changes in said IP identification, sequence number, or  
4 time stamp.

1           3.    The method according to claim 1, further  
2    comprising the step of:  
3           transmitting static information regarding said  
4    data packet over said radio link.

1           4.    The method according to claim 1, wherein said  
2    packet header is compressed according to a ROCCO  
3    compression protocol.

1           5.    The method according to claim 1, further  
2    comprising the step of:  
3           reconstructing a sequence number within said  
4    sequence number header field of said packet header by  
5    incrementing a previous sequence number and assigning  
6    said incremented sequence number to said data packet.

1           6.    The method according to claim 5, further  
2    comprising the step of:  
3           reconstructing said IP identification within  
4    said IP identification header field of said packet header  
5    from said reconstructed sequence number.

1           7. The method according to claim 6, further  
2 comprising the step of:

3                 reconstructing said time stamp within said time  
4 stamp header field of said packet header from said timing  
5 of said radio frame.

1           8. The method according to claim 7, further  
2 comprising the step of:

3                 decompressing said packet header and forwarding  
4 said data packet to a next destination.

1           9. A telecommunication system for sending an IP-  
2 based data packet across a radio link, said data packet  
3 having a packet header including an IP identification  
4 header field, sequence number header field, and time  
5 stamp header field, said system comprising:

6                 a compressor for compressing said packet  
7 header;

8                 an IP identification processor for adjusting an  
9 IP identification within said IP identification header  
10 field to conform to a stream-sequential format;

11                 a synchronizer for synchronizing said data  
12 packet to a radio frame based on a time stamp within said

13 time stamp header field and a timing of said radio frame;  
14 and  
15 a transmitter for transmitting said data packet  
16 with said radio frame over said radio link.

1 10. The telecommunication system according to  
2 claim 9, wherein said data packet is transmitted without  
3 information related to changes in said IP identification,  
4 sequence number, or time stamp.

1 11. The telecommunication system according to  
2 claim 9, further comprising a static information  
3 processor for sending static information regarding said  
4 data packet over said radio link.

1 12. The telecommunication system according to  
2 claim 9, wherein said packet header is compressed  
3 according to a ROCCO compression protocol.

1 13. The telecommunication system according to  
2 claim 9, further comprising a counter for reconstructing  
3 a sequence number within said sequence number header  
4 field by incrementing a previous sequence number and

5 assigning said incremented sequence number to said data  
6 packet.

1 14. The telecommunication system according to  
2 claim 13, further comprising a second IP identification  
3 processor for reconstructing said IP identification  
4 within said IP identification header field from said  
5 reconstructed sequence number.

1 15. The telecommunication system according to  
2 claim 14, further comprising a time stamp processor for  
3 reconstructing said time stamp within said time stamp  
4 header field from said timing of said radio frame.

1 16. The telecommunication system according to  
2 claim 15, further comprising a decompressor for  
3 decompressing said packet header and a transmitter for  
4 forwarding said data packet to a next destination.